

What Is Claimed Is:

1. An electric motor and a generator which is constituted using the electric motor as a power source and is used in an electric power line, characterized in that

an electric drive generator is provided integrally or is provided separately,

thereby a power generation function is obtained.

2. An electric motor and a generator which is constituted using the electric motor as a power source and is used in an electric power line, characterized in that

in a case of a power generation function, the generator is activated and is risen up near to a synchronous speed and the generator is carried out a switch-on operation;

in a case of an electric power generation function, the electric motor is made once in non-load condition and is activated and is risen up near once to a synchronous speed from a stop condition and the generator is carried out a switch-on operation; and

thereby an induction motor excited on an electric power system line or an alternating current is constituted.

3. A fluid machine having a blade or a water turbine and a rotating machine, characterized in that

in a case of a propelling machine, a twist angle is made reversal, and

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thereby without an alternation of a control circuit, a fluid transportation function is changed over to a power generation system.

in every case of a power generation function and a complex function of the electric motor and the generator,

when a stop or a power function is changed over to a power generation system, data necessary to control a load condition, an outside portion power condition, a power condition of an outside generator etc. are detected by a sensor; and

in accordance with the detected data the stop or the power function is changed over to the power generation system, thereby a whole system is operation-controlled.

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5. A wind power generation system having an electric motor and a generator for sending air using a blade and for carrying out a wind power generation by taking air into from all direction, characterized in that

25 a wind direction guide is installed; and
 an induction motor is constituted as a main electric
machine.

6. A wind power generation system having an electric motor and a generator for sending air using a blade and for carrying out a wind power generation, and having an electric motor and a generator, characterized in that

5 an inclined magnetic field is formed in a flow passage using one selected from a single permanent magnet, a single electromagnet, plural permanent magnets and plural electromagnet; and

air is moved always according to oxygen in the air and
10 the inclined magnetic field.

7. A fluid power generation system having a fluid machine constituted by a blade, a water turbine and a rotating machine, and having an electric motor and a generator, characterized in
15 that

in a case of a single power generation function, the system is activated as the electric motor and the electric motor is risen up near to a synchronous speed; and

in a case of a complex function of the electric motor and
20 the generator, a rotation magnetic field is varied electrically, and the system is activated as the electric motor and the electric motor is risen up near to a synchronous speed.

8. A rotating machine having a stator and a rotor,
25 characterized in that

a single conductive member or plural conductive members are provided with a sandwich shape in a laminated iron core;

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on an outer peripheral portion of the conductive member,
a groove is provided to not flow current shortly between rotor
bars.

9. A rotating machine having a stator and a rotor,
characterized in that

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the laminated iron core of the rotor is projected from an axial direction length of an iron core of the stator.

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an extension portion of a rotor bar is formed on an outer peripheral portion of an end ring;

thereby a magnetic filed of an overhang portion of the laminated iron core of the rotor is formed validly.